

# ORAL HYGIENE

AUGUST-1916  
VOL. 6. - NO. 8



PUBLISHED MONTHLY BY  
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# ORAL HYGIENE

EDITED BY WM. W. BELCHER, D.D.S.



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When asked about the *quality* of their work, proprietors of leading labs said: "It's simply a question of commercialism—the *price governs the quality*". They were unanimous on this point.

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Be sure to instruct your lab to use *only* Ney's for you. But unless you mention *Ney's*, you may get something that you would not *willing risk* on your patients. That's all. Thank you.



Send us your Old Gold, Old Silver, Old Platinum, etc. to be exchanged for their equivalent in Ney's Golds or Solders.

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# ORAL HYGIENE

## A JOURNAL FOR DENTISTS

VOLUME VI.

NUMBER VIII.

AUGUST, 1916

### A VISIT TO THE MELLON INSTITUTE OF INDUSTRIAL RESEARCH— University of Pittsburgh

**“W**HERE is the Mellon Institute, and what does it stand for? Let's look it up in the Encyclopedia Britannica. Just as I thought, not a word! If it really amounted to anything they would have given it a reading notice at least. It must be some private commercial enterprise.”

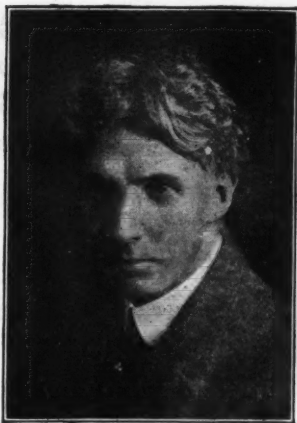
Just a moment, Reginald, before you go; perhaps I can answer your question, “Where is the Mellon Institute?” It is situated in a city located at the junction of the Allegheny, Monongahela and Ohio rivers. They call the place Pittsburgh, which is in Allegheny county, Pennsylvania. The Mellon Institute of Industrial Research, to give its full title, is a department of the University of Pittsburgh, which has an attendance of over 3,000 students.

The reason Mr. Britannica does not mention the Mellon Institute is because it is a pro-

duct of the last five years. Is it commercial? Sure it's commercial, and, like unto the man who was drunk and dressed up, proud of the fact.

Like most things worth while, it had to fight its way. It was first a dream child of the late Dr. Robert Kennedy Duncan, the first Director of the Institute, who died in 1914, before the completion of the magnificent building housing its activities.

He made a prolonged trip to Europe during 1904 and 1907, while he was professor of chemistry at Washington and Jefferson University. Part of this time was spent in Germany and he was struck with the fundamental difference of the manner in which the science of chemistry combined with trade to make her manufacturers great and her industrial chemistry lead the world and America who, except in her steel industry and a few others, was content to



Dr. Robert Kennedy Duncan  
First Director in Chief



Dr. Raymond F. Bacon  
Present Director in Chief

employ chemists to check up a finished product instead of original work. Our steel, oil and electrical industries command a leading position in the world's markets, largely because of the fact that each spends annually many thousands in research. They regard it as an insurance; that they shall maintain their product to the highest efficiency.

Impressed with the need of coöperation, fresh from his visits into the workshops, laboratories and universities of Europe, the Industrial Fellowship System occurred to Dr. Duncan as a sane and practical scheme of relationship between industry and learning to the advancement of both. But he found it most difficult to convince others; science was too fine a thing to prostitute itself to trade interests. His was a strange idea; that it was as much the function of a uni-

versity to bring about the increase of useful knowledge, as of knowledge itself, and the fact that a thing was useful, didn't interfere with its being knowledge.

He succeeded in interesting the University of Kansas, and in 1907 the first Industrial Fellowship was made possible through a grant from a manufacturer of launderers' materials.

Emerson has said, "If a man can write a better book, preach a better sermon, or make a better mouse-trap than his neighbor, though he builds his house in the woods, the world will make a beaten path to his door." This is undoubtedly good logic, but the modern way is to get as close as you can to the mouse-trap market. The Woolworth five-and-ten-cent stores became a great success when moved from the side street into the high rent district.

Success would have come to Dr. Duncan at the University of Kansas, but it was a long way from the industrial center of America, and, when he received a call from the University of Pittsburgh in 1911 to inaugurate a system of research, he came at once and interested the Messrs. Mellon, at the head of the Mellon National Bank, the richest actual residents of Pittsburgh, to the extent that they promised to advance thirty or forty thousand dollars, as necessary, to try out the scheme of this new service to mankind. A small wooden structure was built as a laboratory, and with the understanding if the idea proved practical, they would

finance it. In less than two years the building was so crowded that men were working in the attic. It was a demonstrated success, and on March 1, 1913, the Messrs. Mellon agreed to erect and equip a new laboratory.

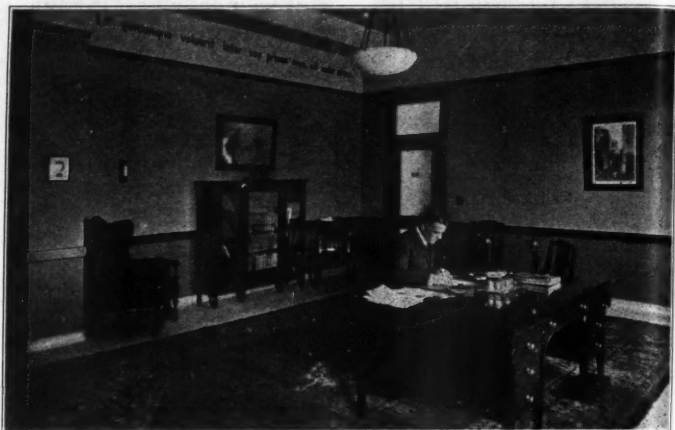
The building, of white granite, is in harmony with the architectural features of the other structures of the university campus. It is of five stories, with an attic laboratory, and carefully planned to secure the greatest amount of light, air and compactness.

Over the doorway of the new edifice appears this inscription:

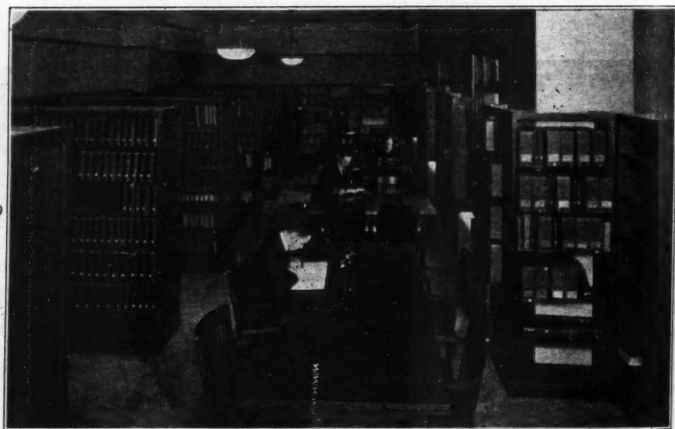
"This building is dedicated to the service of American Industry and to young men who destine their life work to the industries, the goal being Ideal Industry, which will give to all broader opportunities for purposeful lives."



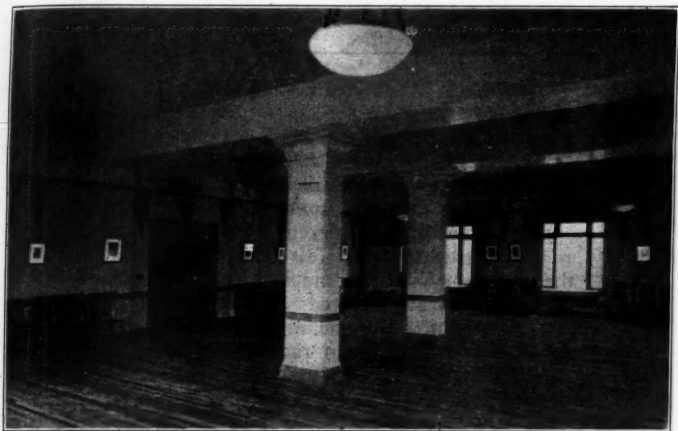
The Mellon Institute of Industrial Research.



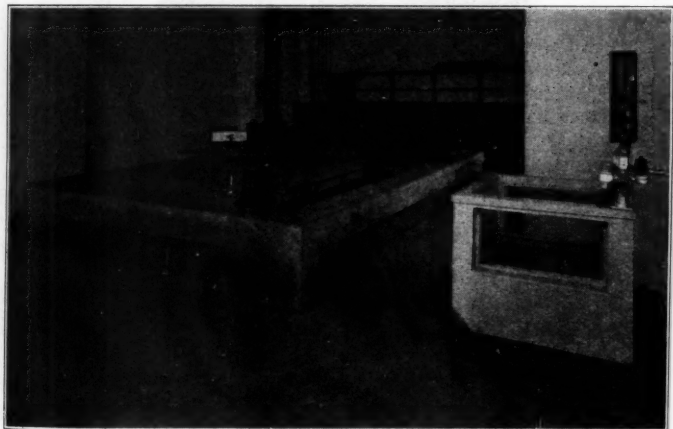
Office of the Director.



The Library containing 2,000 volumes on chemistry and technology.



Fellows' Room—Hall for Fellows, meetings, lectures and social gatherings. Note the pictures of noted chemists and the college pennants on the wall



Special apparatus room—For physical and chemical instruments of precision.

This gives an excellent idea of the object of the structure and its aim.

Passing the bronze doors, one is struck with a memorial tablet:

ROBERT KENNEDY DUNCAN

1868-1914

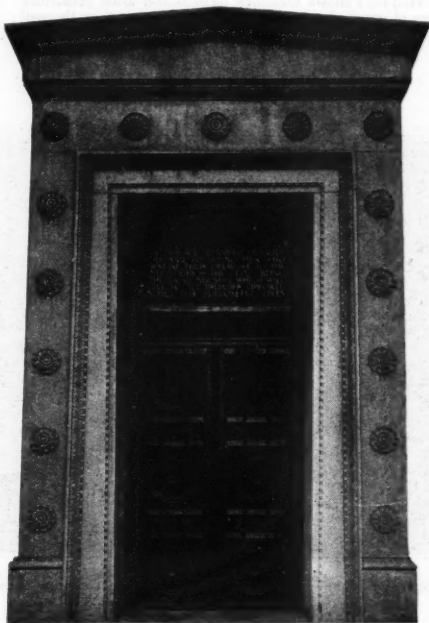
First Director of the Mellon Institute.

Interpreter of scientific knowledge.

Founder of the system of practical co-operation between science and industry.

He dedicated his life to an ideal: That the laboratory shall be the servant of the Nation for the material needs of man.

"Every new significant fact is a permanent gift to the human race in the struggle for that unknown goal toward which it is proceeding."



Bronze Door at Entrance.

The following, taken from a pamphlet put out by the Institute, is here quoted:

"The first Fellowship at Pittsburgh was founded through a grant from a baking company, which desired to improve its product. The sum of money given by this concern was used, as has been all the money which has been contributed to Fellowships, with the exception of small sums for the purchase of apparatus and chemicals, to secure the services of a man who had shown a gift for research to devote all his time to certain problems connected with the baking industry.

"During the five years which have elapsed since the establishment of the first Fellowship, forty-seven distinct concerns have endowed some one hundred and five one-year Fellowships. They did this in the belief that the Mellon Institute was in a position to mobilize and to concentrate all of the advantages and opportunities known to science for the solution of their particular problems.

"The new building of the Institute is the most complete and modern industrial experiment station in the country, and, together with the permanent organization and connection of the Institute, gives very exceptional advantages for the successful prosecution of industrial research work."

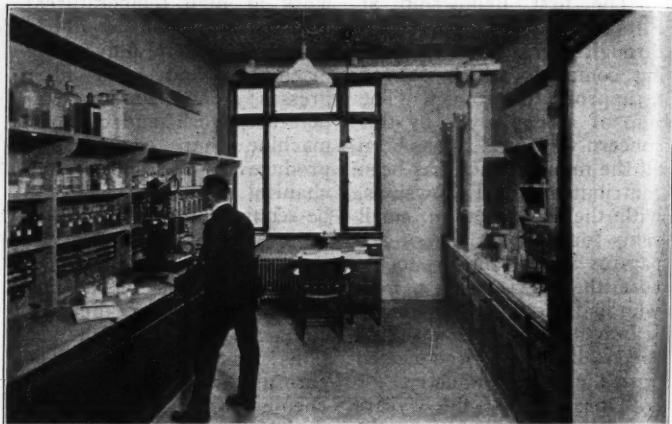
A few words as to the interior of the building will aid in understanding the whole as a working unit. In the basement are the main storeroom,

where the stock of chemicals is kept; the electric furnace room, designed for research work at high temperatures; an apparatus room, equipped with grinding and pulverizing machinery and with filter presses; a room for low temperature work and a large machine shop equipped to produce all the special mechanical appliances likely to be required in the conduct of industrial research. On the main floor are located the administrative offices; the Assembly Hall or Fellows' Room; a library which contains some two thousand carefully selected volumes on chemistry and technology; a dark room, equipped for photography and for photochemical research, and a special apparatus room containing physical and chemical instruments of precision.

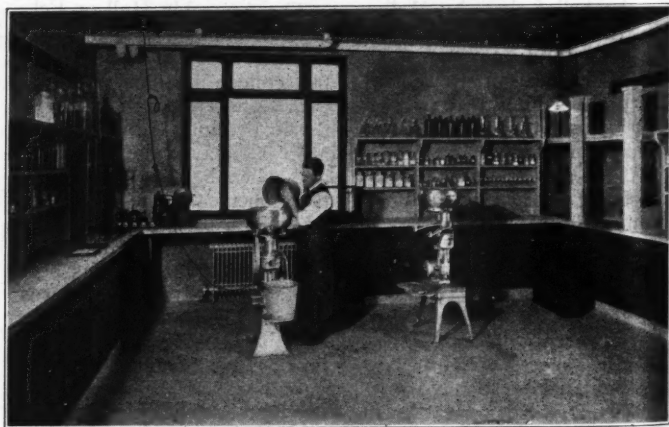
The Assembly Hall or Fellows' Room is worth mentioning. On the walls hangs the college pennant of each man doing research work in the institution. This remains after he leaves the Institute, and when he places this emblem on the wall it is supposed to be a pledge that he will worthily represent his alma mater and live up to its best traditions. Framed pictures of men most famous in chemistry adorn the walls and a modest cabinet contains specimens of the improved products resulting from the Institute's research work to date.

The three upper floors contain over seventy industrial

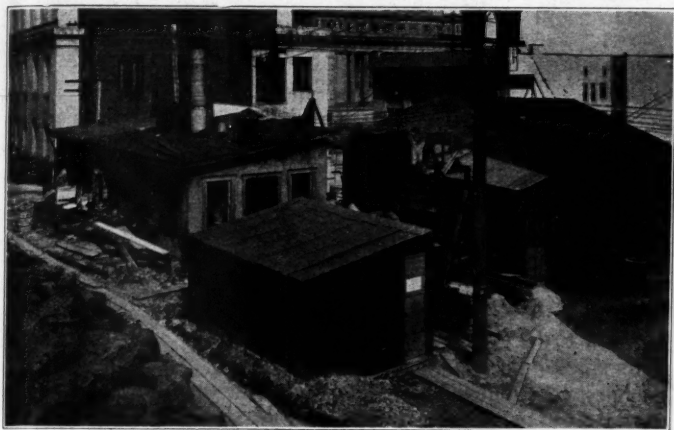




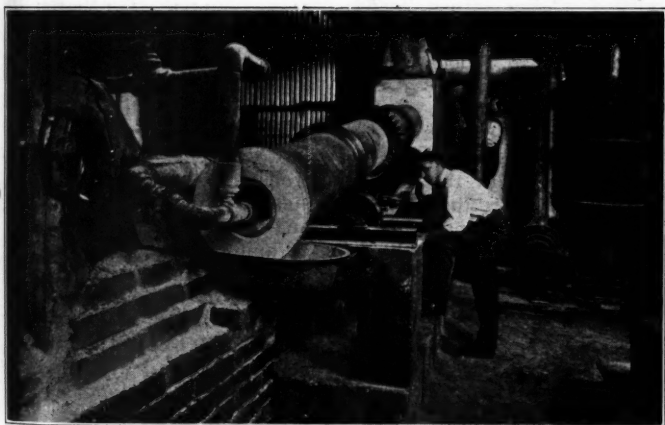
Fellowship Laboratory of the Lee S. Smith & Son Mfg. Co., Pittsburgh.



A Typical Large Laboratory—With every convenience for chemical research.



Exterior of Four Unit Plants, in which laboratory results are being developed on a miniature factory scale.



Interior of one of the Unit Plants.

laboratories. All of these are equipped with tables and hoods constructed for acid-proof stone and with gas, water, vacuum, compressed air and electric current of both direct and alternating type.

"The following table shows the number of Fellowships

March to March	Number of Fellowships	Number of Fellows	Amounts Contributed
1911-1912	11	24	\$ 39,700
1912-1913	16	30	54,300
1913-1914	21	37	78,400
1914-1915	21	32	61,200
1915-1916	36	63	126,800

"The total amount of money contributed to the Institute for the five years ending March 1, 1916, was \$364,400. In addition to this sum over \$300,000 was expended by these concerns in the construction of experimental plants and \$21,300 was awarded in bonuses to fellows for the successful completion of problems.

"During the five years the Institute itself expended about \$175,000 in taking care of the over-head expenses in connection with the Fellowships. Besides this amount, the new building and the permanent equipment of the Institute represent an investment of between \$300,000 and \$350,000.

"That the results obtained under the Industrial Fellowship System of the Mellon Institute have justified the expenditure of these sums of money, both on the part of industrial concerns and the Institute itself, has been shown

that have been founded from March to March of each year, 1911 to 1916; the number of researchers, or fellows, as they are called, who have been employed on these Fellowships, and the total amounts of money contributed for their maintenance by industrial concerns:

by the fact that during the first four years—March, 1911, to March, 1915—seven out of each ten problems assigned to the Institute for study were solved to the satisfaction of the donors. A large percentage of the Fellowships were renewed, showing the confidence which industrialists have in the Institute. The Fellowships which have come to the Institute have attacked such diverse subjects as the chemistry of bread and baking, problems related to petroleum, the corrosion of steel, the technology of soap and soap fats, the bleaching of animal and vegetable oils, problems related to the manufacture of foods, the development of steam power accessories, the fixation of nitrogen, problems of hydro-metallurgy, the development of pharmaceutical preparations, the technology of glass, the production of nitrogenous and phosphatic fertilizers, and the utilization of mineral



Machine Shop—For experimental construction and repairs

wastes. Twenty-five patents have been granted to the holders of Fellowships and there are as many more pending. Above all, some twenty new processes developed in the Institute are now in actual operation on commercial scales."

When a problem is assigned to the Institute, the Director selects, after careful inquiry, the best available man who can be found for the particular work. His first work is put in at the factory of the donor, making himself acquainted with the problem at first hand, and conditions which must be met when it comes to introducing the results of his research work to the manufacturing plant. All results obtained during the course of the Fellowship belong exclusively to the donor. He then returns to the Institute and by aid of the library, familiarizes himself with

what others have done. After this preliminary work he is assigned to a laboratory and begins what may be termed the "test tube" scale of experimentation.

Our man of the Fellowship is just plain man with good horse sense and a college training to back it up. There is nothing peculiar about his make-up, other than he must possess exceptional normality, industry and patience. To one interested in research work, it is never tame nor dull; the unexpected are encountered at every step and frequently lead to new lines of investigation which sometimes become more important than those carefully prearranged. Every week he reports progress to the Director-in-Chief or one of his assistants, and receives their help and encouragement. Every Fellow is ready to help him by suggestion if it does

not conflict with their duties of research; every apparatus and facility of the Institute is his to command. In such an atmosphere, and with the stimulus of other investigators obtaining results; the reputation and good name of the Institute at stake; his own and that of his alma mater; and a possible bonus, all spur him to the highest pitch.

After the "test tube," or laboratory scale, has produced results worth while, the next step is to manufacture in quantities. This is by means of the "Unit Plant." Many of these are housed in temporary wooden buildings outside, and here actual factory conditions are reproduced. A process may work finely in the laboratory, but takes eight months or a year to adapt it to the Unit Plant Scale. When these experiments are complete, the donor knows his problem and the machinery best adapted to his needs to produce results.

"The Manufacturer's Scale" is when actual manufacturing is undertaken, based on the results of the Unit Plant experiments. The Fellow who has conducted the research often goes with the company to superintend the manufactured product. He thus becomes a specialist and there is a vacancy which must be filled, and in this manner the personnel of the Institute is constantly changing and ever young.

It is a matter of interest to the profession that during the past two years a prominent dental manufacturer has been represented by a Fellowship in the Mellon Institute, and some time in the next year, as soon as the "Manufacturing Unit" is perfected and the material has been tested in the mouth, a new synthetic filling material will be placed on the market. The accepted material is the result of the working out of four hundred actual formulas of product, each of which meant calcining, grinding and testing results.

Industrial America, if she would keep her place as a great manufacturing nation, with the keen competition that will undoubtedly follow this European war, cannot have too many Mellon Institutes. It is an encouraging sign that other universities are giving the matter serious consideration. What is needed is a like institute in every state of the union. Industrial research is made possible for the small manufacturer, and he is able to meet the million-dollar corporation on their own ground with the facilities offered him at the Mellon Institute, which has about reached its capacity and will soon necessitate a waiting list.

Reginald, your attention, please! What does M. I. I. R., U. of P. stand for? "Mellon Institute of Industrial Research, University of Pittsburgh." More power to it, and many of them!

## A FEW WORDS ON PREPAREDNESS IN THE DENTAL PROFESSION

### ARE YOU PASSING THE HEMLOCK TO YOUR PATIENT?

The author, in a letter to the editor, requests that we publish this article and, for various self evident reasons, refrain from mentioning his name. Most of the material appearing in the magazine with no indication of authorship is prepared by the editor, and ordinarily we would not publish material to which the dentist is afraid to attach his signature. But there are exceptions and this is one of them.

SOME few years back I read an article in one of our best periodicals concerning a statement in a report of the Insurance Actuaries of America. It said life had been lengthened six years since 1885. One among the causes was dentistry. A plea was made for cleaner mouths, bodies, brains and lives. The dentist was delivered a short punch to quicken his step, not to stop it.

America leads the world in the science of dentistry. In spite of the advance in past years, nearly every patient the dentist has is afflicted with pyorrhea alveolaris, so called, in some form. When they leave the dentist they are more apt to have it than before. I can see and hear the tell-tale bravado air with the associated smile or sneer as the average dentist reads this.

Causes given a year or more ago were deposits about the teeth, systemic disorders and ill-fitting crowns or fillings. A wise man would listen and wonder at the self-indictment. Now he will probably talk of amoeba, thinking it gives him a clean bill against careless and in-

ferior work. After he has finished he cannot explain why 90 per cent., he may have said 99 per cent., of the people are so afflicted.

What is he doing to alleviate the sufferer or mitigate the disease? Can he justify the careless manner or haste he has assumed in the cleaning of your teeth or that he passes you on to the assistant? If clean teeth is the largest factor in preserving the teeth, why does he adopt this plan? Why does he hurry over the part of the teeth that only he or you may see? He scars and lacerates the gums and pushes hard particles under the gums; possibly starting a new case or aggravating an old one. His instruments may or may not be sterile and you may be handed my pyorrhea germs.

Ask him why pyorrhea alveolaria is so named. Ask him for a definite and effective treatment. Ask him what his treatment is. Then think over what he has done in past operations in your mouth in direct contradiction. I have found that the average dentist belongs to the class who, when unable to cope with a problem, chucks the pesky

thing overboard with an anchor attached. He pulls out the offending tooth and tells you he has saved your teeth. He belongs to the clan who pass you the hemlock when you insist on reason.

The local contributing causes of pyorrhea as given by the eminent men in that work are traumatism, unclean mouths, ill-fitting crowns, fillings and bridges. These are enough. The disease has its inception in the dentist's practice to a great degree. It emanates from the source where we should naturally expect relief. A fitting tribute to a profession in which America leads.

Pyorrhea alveolaris is an indictment of the profession not only as regards the inefficient treatment or lack of it, but an indictment of the every-day operations. I mean to say that fillings, crowns, bridges, impressions, teeth cleaning and various prosthetic restorations and regulations are the large contributing factors in the disease. No mention is made of causes of neglect and omission.

The profession needs a survey of what is being done to promote knowledge, appreciation and production among the public, physician and dentist. They need to be shown the direction of their forces for the most good. They need to have the men guiding these forces from a selection of the unbribed, uncoerced and unattached.

The survey must not concern itself with only students,

hours, branches, professors, practitioners, locations, and per capita wealth. It must concern itself with the direction of the studies and the teachers; the clearing up of ideas as to what constitutes a genuine education for student and layman; the determining if present methods are of sufficient quantity and quality—the psychology of the mass must be reached, which your bickerings in your journals do not do; and a publicity campaign to change the order of things among the laymen.

Direction of students is a most important problem. To teach patience until it is ingrained in their lives is an appalling need. Show them that patience is a necessity and must be or else the structure of centuries of work will fail. No one can deny that the product of most of our schools today is sent through as a shot through a cannon with a mission resulting in much the same work. Last year I received a letter from a Western school urging me to send my friends to that school that year for that was the last class to be enrolled under the three-year course. High school requirements would be taken care of. An invitation to send my friends to school to inadequately prepare themselves for a life work—and I know men who did it!

Teach the student to wait. Dr. Washington Gladden says that one of the serious defects of many characters, one



of the chief reasons of failure in many lives, is the lack of the virtue, patience. From a letter of one of America's eminent specialists I quote. "the average dentist does not care for this kind of work, pathology, bacteriology, etc. He wants to be trained mechanically and get back to his office to capitalize such meager knowledge. Therefore, I am quite pessimistic regarding the future." And that mechanical training is pyorrhea's ally.

We want what we want when we want it. In this profession there is fighting, pushing, shoving, struggling to the goal without adequate preparation. You jump in, fight furiously and come to the end of an inglorious day. The work you are to do is of subordinate value. You want to make the points. You want to win. You want the ephemeral plaudits of a fickle public. You are not caring for the value of the service you give. You want the reward—reward for doing work you are not fully equipped or prepared to do. Deceivers! Frauds!

I quote from Gladden: "In every profession the same vicious haste prevails; men are so eager to launch themselves into money getting that they refuse to pay the honest price of success—diligence and thoroughness of preparation." We see the folly of it in the profession of dentistry. We hear on all sides "we are

not paid well for our services." Believe me, you are too well paid for your costly contribution. We hear complaint, dissatisfaction, regret, sorrow among the scrambling mass. Farther back we go and howlings displace murmurings. We witness dishonest, unscrupulous, unprincipled, imprudent acts—the weapons of last resort as the goal slips farther away. In the wild disorder, there is seen a body of men working quietly, persistently and patiently through it all. Carefully prepared they stand out nearing the goal where success awaits a just reward for patience, diligence and moral rectitude. The curse of education is that it is a means of livelihood.

"If we are to save our manhood, our integrity," says Gladden, "we must learn to wait; to wait for success till we have fairly earned it; to wait for position and responsibility till we have fitted ourselves for them; to wait for the crown of life till we have won it by fair fighting."

In this most important period of American history, when we are awakening to the meaning of the word preparedness, there is no place it means more than in a profession whose future contains the greatest latitude for brilliant advance of any. In answer to Dr. Mayo's question, "Will the dental profession take the next step?" I answer "No. It is not prepared."

## THE QUESTION OF RETENTION IN PROTRUDING UPPER INCISORS

EDWARD CANNING, D.D.S., Denver, Colo.

The author well says: "To save teeth is the most important mission of the dentist, but if in an effort to save one tooth he impairs the vitality and stability of many others, his treatment is not based on the final welfare of the patient." In selected cases he believes in extraction. Read and see if you agree with him.

**T**HERE is a time in the history of every case when protruding upper incisors could have been prevented by proper treatment, and permanent teeth erupting subsequently would have assumed normal mesio-distal relations with the lower arch. In incipient protrusion of the upper incisors, we find the six-year molars, shortly after their eruption, advanced, in whole or in part, the distance of a cusp either on one or both sides with the intervening deciduous molars and cuspids still present. Nothing could be easier at this stage of the trouble than the movement distally of the advanced molar into normal relation with the lower and prevent the protrusion that would be inevitable when all the permanent teeth had erupted. This condition can be named "Unconfirmed Protrusion," and treatment at this early age is most easy with permanent results. It is, in fact, preventive orthodontia.

Should this condition of malocclusion not be corrected in its beginning or unconfirmed stage, the remainder of the permanent teeth as they erupt will also take an

advanced position in their relation to the lower teeth, and we are confronted by protrusion of the upper incisors, which varies according to the advancement of the six-year molars. After the permanent teeth have all erupted (third molars excepted), the condition can be called "Confirmed Protrusion." When the case has progressed into the confirmed stage, it is, for several mechanical reasons, exceedingly difficult to restore normal occlusion, and from inherent causes the teeth will not remain in their new positions, when finally released from retention or artificial restraint. The new positions are not permanent when thrown on their own resources for retention.

We have heard much about the interlocking of cusps and teeth being sufficient in themselves to retain regulated teeth; but when we consider that at all times, except during a voluntary movement of the jaws, such as mastication, the occlusal planes of the teeth are one-eighth of an inch or more apart, it would seem that this form of retention has been greatly overestimated. It is, at best, only active an hour or two each

day, while during the other twenty-three hours, more or less, the teeth are not together at all.

There is a wide difference both in dentistry and medicine between treating successfully an incipient or *unconfirmed* condition and the same trouble that is chronic, or *confirmed*. The first may respond instantly to treatment with a permanent cure, while the latter may not respond at all, or only temporarily, making surgical interference necessary for permanent results.

Surgical interference in confirmed cases of protruding upper incisors, is **not only** permissible, but absolutely demanded if we would have permanence and facial harmony as a result of treatment.

We all understand perfectly that to save teeth is the most important mission of the dentist or Orthodontist, but if in an effort to save one tooth, he impairs the vitality and stability of many others, his treatment is evidently not based on the final welfare of his patient. In the last analysis, when everything is summed up, he has done more injury than good. This is precisely what happens in endeavoring to reduce protrusion of the upper teeth without extraction: the first bicuspid are temporarily saved at the expense of all the other teeth in the mouth.

In correcting malocclusion of this protruding type, three great objects must be kept

constantly in view, namely:

First. Satisfactory masticating surfaces.

Second. Restoration of facial harmony.

Third. Permanence.

The last, of course, is the most important, as without permanence the other desirable results would be but temporary.

The treatment, therefore, must always take into consideration as the most important factor, the question whether the moved teeth will stay in their corrected positions when finally thrown on their own resources.

It has taken some years to prove to me that the correction of these confirmed cases of protruding upper incisors is an impossibility without extraction. Give the teeth time enough and they will partly, or wholly, relapse into their old positions of malocclusion. The real difficulty is not in moving the teeth into occlusion, but in the inherent disposition of the whole upper arch to resume its original lines when no longer subjected to restraint.

One of the arguments that has constituted an important plank in the Orthodontia platform for a number of years, but which now begins to show signs of decay, is the interdict against extraction under any circumstances. If the teeth are all present they must be moved into harmonious relation regardless of malposition; and if all are not present, room must be made and an artificial tooth inserted, re-

ardless of the age of the patient, or whether the conditions are confirmed or unconfirmed. In other words, Orthodontia, unlike other things in this world, is limited by no laws, mechanical, physical, biological, or anything else under the shining sun. The aftermath as to injury of tissue in these extensive distal or mesial movements seems never to have received consideration.

This treatment without extraction would be ideal if biological laws, over which at present we have no control, did not manifest displeasure in loose teeth, pyorrhea alveolaris, gingivitis, recession of the gums, etc., all caused by the long continued pull of the intermaxillary rubbers in combination with the long wearing of molar clamp bands. The erosion of teeth from the long wearing of bands, should in itself be a strong and sufficient reason why the work should not be attempted without extraction. Without extraction, years must elapse before the teeth are finally relieved of all bands, and then what? In time a relapse. And again, to say the relations between the tooth and the walls of the alveoli can be disturbed at any age and to any degree, without injury, is not conceivable. Nature builds the tooth into the process thoroughly but once, and if its adhesiveness is long placed under strain and to too great an extent, the tooth becomes loose, and never again regains

its adamantine stability in the bone.

The true cause of Orthodontia is not interested in brilliant technic at the expense of the patient, but is interested in what can be done and stay done without injury to tooth structure or other tissues. Orthodontia is still very young and is in a state of progress or evolution. It is as beneficial for us to know what cannot be done, as what can be done.

We will consider a case of true protrusion of the upper incisors, that is, the lower jaw and teeth are normally posed while the upper teeth are advanced the whole width of a bicuspid tooth on each side. To correct this case in an ideal manner, the whole upper arch without extraction should be carried distally into occlusion with the lower teeth without changing the position of the lower teeth at all. The force generally used to accomplish this purpose consists of rubber bands, suitably adapted, passing diagonally from the upper to the lower teeth. With this power, the upper teeth are moved distally in sections, or en masse; but since these rubber bands are reciprocal in their action, and the lower teeth are more easily moved forward than the upper are backward, we are confronted by the principal movement taking place in the lower jaw, which to begin with was normally posed.

Therefore, when occlusion is established, we have bi

maxillary protrusion. It is quite impossible to move the upper jaw backward, either in sections or en masse, without at the same time moving the lower jaw forward.

In connection with this movement of the lower teeth by inter-maxillary rubbers, it is much more than probably that the lower teeth are not moved forward through the process, but that the condyle in the Glenoid Fossa is merely distorted, which, when released from retention, slips back into its old location and carries the lower teeth with it. This temporo-mandibular joint is undoubtedly the point of least resistance when force is applied to the lower arch. The length of time required to do this work in confirmed cases, varies from three to five years, and some of its disadvantages are as follows:

Loose teeth (permanently) from long pressure.

Chronic gingivitis, from long pressure and bands.

Recession of gums from long wearing of bands.

Tipping of molars from diagonal force of intermaxillary anchorage.

Three to five years of impaired mastication.

General annoyance to the patient for same length of time.

Eroded teeth from long wearing of bands.

Ultimate relapse when retention is removed.

This may seem like a pretty severe arraignment, but it has

the redeeming feature of being true. And the truth is what we are after.

Now let us consider results where extraction is used in these confirmed cases of protrusion:

Length of time of treatment, three to four months.

Retention of the simplest kind, six months, and very often not any; pressure of the lips being sufficient.

No marking or erosion from long wearing of bands.

No pyorrhea alveolaris or gingivitis from the same cause.

No tipping of molars.

No recession of gums from bands.

General annoyance and impaired mastication, only three to four months as compared to three to five years.

No disposition at all for the six anterior teeth to move forward when retention is removed.

Facial lines precisely as good as if all the upper teeth could have been moved back and held.

Dr. Case (of Chicago) has long ago said, that where the lower jaw was normally posed with protruding upper incisors, the extraction of the first upper bicuspid was demanded in order to secure correct facial outlines. This is absolutely true, and I will go Dr. Case one better, and say that without extraction permanent retention is impossible in the great majority of cases.

## THE ROCHESTER DENTAL DISPENSARY

Why I Believe it is a Backward Step for Rochester

FRANKLIN W. BOCK, M.D., Rochester, N. Y.

The Author does not agree with the editor in many things. That's one of the reasons we delight in publishing his paper. He approves of the Rochester Dental Dispensary—very much so. Looking at it from the Socialistic side he thinks it a mistake for private philanthropy to take the place of the municipality in providing the service for its school children. Glad to hear from you if you differ or agree with his ideas.

THE great problems of individual and community health cannot be well solved unless there is efficient co-operation between all who are striving for the same goal. For this reason, I believe we must not consider dentistry as a distinct science, but as a part of the greater science of medical practice, just as is the specialty of ear, nose, and throat; and as such I consider it.

For many years, the Rochester Dental Society has been carrying on in Rochester, both through personal sacrifice and with the help of friends who believed in the work they were trying to do, a series of practical educational dental demonstration, striving to enlighten our community first as to the economic wisdom of doing dental work for the children in our schools, and next to awaken the community to its social and moral obligation to guarantee its children good health.

"Good health is purchase-able." "Is the city of Rochester willing to purchase it for her children?" is what

these demonstrations have been asking in a practical way.

Through a slow strenuous process the people of Rochester have come to realize their obligation and at this time, I believe, are willing and ready to assume the burden—if it may be called that—of furnishing our children with the necessary medical care to guarantee a better physical foundation upon which may be built a fairer and more stable superstructure of good citizenship.

Educational efforts of this kind, as they progress logically, develop certain ideals and long ago a four-fold ideal was built up by the combined constructive intelligence of the dentists, physicians, educators and citizens of Rochester toward which we have been slowly but surely advancing. This Rochester ideal for the medical care of its children is—for though it seems temporarily to have been deidealized, it is still alive and will surely become potent again when Rochester comes into its own,—



First. Under municipal control.

Second. Financed by the community.

Third. Free for all children, and not only for so-called poor.

Fourth. Clinical units established according to medical necessity and centers of child population, and, where the work can be done with the least waste of time and energy of the school system and of the child—namely, in the school buildings.

Of course, as in any community, fallacious and illogical arguments have been brought forth against one or more of these items, but under the propelling force of the truth in the ideal, three clinics were established, two of them being in public schools, one of these latter being the first of its kind in this country. Visiting dental societies, boards of health, and boards of education, were so impressed by the practicability of the ideal and of the progress made toward it by the Rochester Dental Society in these clinics in our schools, that the ideal has rapidly spread over the country and many of our larger cities having adopted one or more of its elements are now working toward the complete ideal.

It must be remembered that at the time of the organization of the Eastman Dispensary, Rochester had not reached its own ideal, but it was here just the same, and we were so positively work-

ing toward it that today many of our people believe that our ideal is really to reach its full flower in the Rochester Dental Dispensary. This, unfortunately, is not the case. After careful investigation and rather lengthy discussion with Mr. Eastman, I am convinced that the present plans of the Rochester Dental Dispensary will be a serious obstacle to the logical and efficient development of medical school work in Rochester.

Naturally, the question arises as to the practicability of this so-called Rochester ideal.

First, as to municipal control: I am quite sure, that had the Rochester Dental Society not feared that its work would be used for political purposes, they long ago would have asked the city to take over and further develop its work. One of the directors of the Dispensary organization said to me, "You wouldn't trust this great work to that city-hall bunch, would you?" No one distrusts the integrity and efficiency of the "city-hall bunch" more than I, and yet I believe it is better for the children of Rochester that it be put under their control temporarily than that the present plans of the Rochester Dental Dispensary be allowed to become permanent. May I suggest to those who fear political control, that corrupt politics can more permanently establish itself in a private philanthropy than in a public institution. The "city-hall bunch" is not



to be in city hall forever, for their day of reckoning is at hand even in Rochester as in other communities, and for that reason they are less to be feared than many of the so-called charities. Every community has had its sad experience, as has Rochester, with politically managed private charities. New York, Chicago, Los Angeles, Cleveland, Bridgeport and Toronto, with many others, have undertaken the control of this work. Have not these cities a "city-hall bunch?" Is the work in them being prostituted? Rochester is said to be the "best governed city." Then why do its dentists fear the "city-hall bunch?"

Second, as to community financing of the work: All of the cities mentioned above finance the work out of the health or school budgets, and not one of them, with the single exception, perhaps, of Toronto, is putting into the work what Rochester will have to spend under the Dispensary plan—and yet Mayor Edgerton says we couldn't afford to finance the work. Twenty thousand dollars for five years is pledged out of the city treasury to help this private philanthropy. I have faith enough in the practical efficiency of the so-called idealists of the Rochester Dental Society who started this work, to believe that, had they had this amount of money at their disposal while they were building up their ideal, Rochester today would have the best system of

school dental clinics in the world and her children by this time would be the best cared for, dentally, in the country.

Third, as to the standard for service: Toronto and Bridgeport are, I believe, the only cities which give the service to all children without regard to the financial standing of the parents, but most of the cities are so far on the road to the complete ideal that they give at least emergency service to all children who need it. Some cities have abolished the financial standard and have adopted the seemingly more reasonable social standard.

In some cities a five-cent fee is charged for each visit and this plan will be adopted in Rochester, I believe, under the erroneous belief that by so doing, you prevent the children from becoming paupers and you increase the child's appreciation of the work done because he has to pay for it. I do not believe there is a nickel's worth of truth in the theory. In the first place, our children are not paupers; they are not objects of charity, and you can't make them such by giving them the physical care they need to keep them well and happy—and what it is our moral duty to provide. It is my experience with children that they will use and abuse things they buy themselves about as badly as they do the things which are provided. Anyway, it is a damnable ideal to hang up before

a child that you can't be human without the interposition of a nickel.

Fourth, as to the methods of carrying on the work: The Rochester ideal believes that more or less widely separated units, preferably in the school buildings, is the best way, and the really constructive efforts in the country are demonstrating that this is the only practicable method of handling the problem with any hope of ultimate success. Boston is the only exception to this rule. The Forsyth Dispensary is the only example of the centralized dental clinic for school children in the country, and is the result of the old institutional ideal for philanthropic work. I do not wish to be understood as criticising the philanthropy of the Forsyth Brothers,—it is great—but it is too bad they did not have men of a little longer vision to advise them. The Forsyth is doing fine work, but I predict that if it is to do the best work—if Boston expects to handle the dental problems of its children efficiently—it must sooner or later give way to the school clinic. It is inevitable.

From the institutional point of view, there is much to commend the centralized clinic, but from the human side, from the standpoint of the best interests of the child which we are trying to help, it is far back in the ruck when compared with the localized clinic. The centralized plan was the ideal at one

time for social service, but it is no longer so, especially for work with children. Sing Sing may have much to commend it as an institution, but from the human standpoint it must give way to the farm colony. Elmira Reformatory may be ideal as an institution, but when you wish to give boys a new and better inspiration for life how does it compare with Industry? The centralized grammar school or the centralized kindergarten would be inspiring institutions, but, for the best interests of the child, for the best practical solution of the problems of education, could they be considered for a moment?

The care of the physical child is as important and ever present a problem as is the care of the mental child, and in the solution of the problems of both there must be sympathetic and detailed co-operation between the educational and the medical authorities, and this co-operation must be from the viewpoint of the child and not in the interests of the institution.

The Rochester Dental Dispensary has absolutely set aside the ideal of the Rochester Dental Society and of the mass of the thinking people of Rochester.

First. It does not plan to turn the work over to the city. This has been the ideal of dental societies the country over and, except in Rochester, they are working toward this ideal as rapidly as

possible. It may be interesting in this connection to know that The Rochester Bureau of Municipal Research, of which Mr. Eastman is president, fathers and issues the report of the New York Bureau of Municipal Research made after its recent survey of municipal activities in Rochester. In a section on Free Dental Clinics, this report closes with this significant sentence:—"It is therefore recommended that the city take over these dental clinics and conduct them as part of the Health Bureau's Inspection service, so that the health officer may not only be responsible for this money spent for their support, but also may determine how they may render greater service."

Second. It is willing to receive city money to help in its work, but the city will have no control of the expenditure of the money.

Third. It does not plan to give this service to all children. Its ideal is to make the children of Rochester "objects of charity" for all time.

Fourth. In the centralized clinic, it has adopted a plan which is admitted by the best authorities to be incompatible with the highest efficiency.

I am perfectly willing to admit the probability that the Rochester ideal in its entirety may only be reached through a more or less protracted development, but I believe that it might be reached more quickly than we think, if we would do the reasonable and

consistent thing for our children instead of adopting the laissez-faire attitude and throwing all the effort upon Providence. Who, we hope, will bring it about in His own good time.

Furthermore, I believe that in this day and generation no one has any moral right to organize a work of this character, whether it be under the guise of charity or as a municipal enterprise, without serious consideration of the universal tendency toward complete socialization of all work involving the welfare of children.

There have been voiced a number of infantile and baseless arguments in favor of this central clinic. For instance, it is said that we must have it so we can have a large assembly-room in which to give popular lectures on dental subjects—in spite of the fact that seventy-five per cent. of our schools have better assembly facilities than will the Dispensary.

It is said that it will be impossible to get the necessary operators for school clinics; that they could not be trusted without the close supervision of a central clinic to do good work; that they would kill time; that you could not be sure of the proper disposal of supplies. If these are true, even to the extent of being a legitimate excuse for exploiting our children for the sake of an institutional ideal, then the dental end of the medical profession better "clean house." I, for one, do

not believe they are true.

It is said that you can't do aseptic work except in a specially constructed building. How many dentists work in specially constructed buildings? Fine equipments are fine; we all like them, but it is the man and his technique, and not buildings and equipments, which constitute the fundamentals of asepsis.

One of the directors of the Dispensary said to me that the city could not afford to put the necessary equipment into the schools, which would cost a thousand dollars a unit. I told him that actual figures from other school clinics and from the Forsyth, put the cost at from three hundred to six hundred dollars per unit. "But," he said, "you couldn't put in a sterilizer for that amount," and he almost said something when I told him that the kind of sterilizer the Dispensary will use would cost from twelve to twenty dollars per unit.

Furthermore, the Dispensary is not to buy its equipment anyway. It is said the \$20,000 worth, a full and complete equipment, is to be donated by the Ritter Dental Mfg. Co. of Rochester, as a memorial to Mr. Ritter. Mr. Eastman gave a beautiful, lakeside park to the city, and Mrs. Watson gave our beautiful art gallery to the city, both without the interposition of a private philanthropy. I see no logical reason why the Ritters could not have equip-

ped school dental clinics on the same basis. As a means of advertising, it would be the best investment they have ever made and, as a memorial, it would be remembered by the people of Rochester after the Dispensary is forgotten.

One of the dangers against which I long ago warned the dental men, is very manifest in this plan. It over-emphasizes the importance of dentistry as a separate profession instead of as a part of the medical profession, in that the cost of the work to be undertaken is out of all proportion to the needs of the rest of medical work for children.

In conclusion: I believe this the best work Mr. Eastman has yet undertaken for Rochester. Even as at present organized, the Dispensary will do great work. I do not want him to stop. I only want him to do a great work in a better way. If he would but re-organize the Dispensary to meet the ideal which we have built up here, dentists not only of Rochester, but the world over, would hold up their hands to him in commendation, otherwise the day must come when thinking men and women will feel as I do at this time, that the Rochester Dental Dispensary, as at present organized, is an unfortunate backward step in the development of the medical care of the children of Rochester.

## REMINISCENCES FROM ONE OF THE OVERSEA DENTAL UNITS

LIEUTENANT E. F. MOLLE, D.D.S.

This article appeared in the Australian Journal of Dentistry and is the personal experience of the author. It is well worth reading.

HAVING left Queensland as your first officer representative for the war, I judge that you will be interested to know what work, also the amount of work, we accomplished during my stay in Egypt. I regret that my work was so suddenly terminated, as I was unlucky enough to contract paratyphoid, which put me down and out. It was compulsory for all typhoid patients to leave Egypt on account of fear of infecting the wounded, so we were all bundled off to Suez and shipped away by transport for Australia.

In Heliopolis, No. 1 Australian General Hospital, we had a sudden epidemic of this disease, and it accounted for five medical men and two dentists from our State in the space of two weeks. It is asked by many how we all contracted this disease after being inoculated—well, this para-typhoid is produced by a different bacillus entirely to the true typhoid form, and seems to be peculiar to the East, being fairly common amongst the Egyptians in Cairo. The inoculation certainly saved some of our lives, and indeed thousands of others, and can be classed as one of the wonders of the century in medical re-

search. Our dental units started under the disadvantage of infancy, and its dispatch was considered purely an experiment which was brought by the pressure applied by most of our most ardent workers in all the States. We feel proud of the result achieved to date, and also rest assured that our place in the Australian Army is absolutely permanent, and our members are looked upon by the medical profession as on an equal footing.

The present is certainly, dentally and otherwise, a record-breaking epoch. If one had predicted twelve months ago that we should have today a unit with forty highly qualified dental surgeons serving in our Australian Forces as dentists, he would have been looked upon as a victim of lunacy.

Our dental unit, including mechanics and orderlies, today numbers about one hundred men, and our members include men from the leading universities of the world. The chain of ignorance in regard to the importance of a sound mouth for a sound body has at last been broken and we have made a gallant beginning. Our work as an oversea unit dated from August, 1915, when a lieutenant

with one staff-sergeant mechanic and one dental orderly were despatched from each Australian State to Egypt.

Our work has been on the troopship and on landing in Egypt we were drafted off to various hospitals and camps. Here we found that our presence was an absolute necessity, as we found hundreds of men who had been marked as unfit for active service, and some of them almost starved through dental treatment. Our work began under very unfavorable conditions, as our equipment was quite inadequate, and our staff of mechanics out of all proportion to the work ahead. We found ourselves unfortunately without any organization, or head, to appeal to, and this added greatly to our inconvenience, as some of us were rushed to death and others had, comparatively speaking, an easy time. This state of affairs was the result of being despatched without a recognized senior officer, and the loss through sickness temporarily of the one who took control. We found that the officers commanding the various hospitals would not help us by taking charge of their dental units, and we were placed under the authority of the Director of Medical Services.

However, even under the adverse circumstances we managed to make good headway, as our staff assisted us to their utmost, working long hours in a climate which had a lowering effect on the hu-

man system. As the numbers of men coming from Australia increased, extracting and plate work became almost supreme as a means of getting the men fitted for the trenches in the shortest possible time. As a test of physical endurance, the extracting of soldiers' teeth found most of us out, and, after extracting from seventy to ninety during the morning, one felt like retiring for the day, instead of resuming after lunch for a second batch. We noticed the difference immediately the Dental Regulations were relaxed in Australia, as men came forward in dozens with mouths which were walking graveyards. These men should have been fixed up in Australia or left at home, as most of them had no chance of getting properly fixed up, and went off to the front in a condition which made them easy victims of dysentery and typhoid. One could not fail to notice amongst the men who were invalided from the front the shocking condition of most of their mouths. In the hospital wards we found the usual apathy toward hygiene, and most of the cases of severe dysentery showed a terrible state of neglect. It seems time that the medical section took action in this matter, and included it in their course of treatment. Our organization by this time has become complete through the appointment of Major Hall in Melbourne, and we may expect great results from

our Dental Brigade, as we have firmly established ourselves in the minds of both medicos and men as an indispensable body. We were indeed pleased to receive such a spontaneous welcome from the medical profession, who did everything in their power to help us in our work.

The matter of our status should be looked into as we are the only dental unit whose members are graded as lieutenants. The Canadian, New Zealand and other units all place their operators on the footing of captains, with a first-class organization to manage affairs. The Canadians' staff included a lieutenant, colonel, one major and ten captains, with a large staff of mechanics and orderlies. The captains receive the oversea pay of captains plus 10/6 per day—extra professional allowance—37/6. Even the Australian Veterinary Corps rank its officers and captains; thus it seems unfair that we, who treat humans, should be placed below those who treat the animal. When we consider that most of our members are placed in large hospitals near cities where living is very expensive, the members of our unit have a hard battle to keep financial, as their mess and incidental expenses are very heavy. The members of our unit were indeed unlucky in not being able to proceed to Gallipoli, simply on account of the volume of work in Egypt being too great to spare a man. The New

Zealanders, however, established a Dental Base on Anzac Beach, under the command of Captain Finn, whose work was much appreciated by members of all ranks, and he was finally awarded the Distinguished Service Order for conspicuous gallantry in getting the wounded away under heavy fire to the transports. Our nearest Dental Unit to the trenches was at Lemnos Island, which is about three hours' run to the boat. The unit was attached to the No. 3 A. G. H. and was well equipped and officered and did splendid work. The rush on this unit became so great at times that the patient had to be sent back to Egypt for attention, and even there we could only take the very severe cases at once, with the result that the men lost weeks in traveling and waiting about. This state of affairs was, of course, inevitable, as the base hospitals were situated such a distance from the trenches. The wounded who could not be accommodated at Lemnos were sent on to Alexandria, which was a three days' steamer trip. Here the very cases needing attention were again sorted out, and the remainder sent on to the General Hospitals about Cairo. These men had four days' traveling before they reached their beds, and the stoicism displayed by these men was a marvel to witness, as, in spite of their sufferings, one never heard a word of complaint. The most heart-touching case



I witnessed that came to Heliopolis was that of a sergeant who had lost both his eyes, also his right arm; this boy was bright as possible and simply reveled in chatting to those about him, and tried hard to belittle his action which won for him the much coveted Victoria Cross.

The Australian boy as a soldier has opened the eyes of the world as to what he is capable of, and now I want to say a word for his Australian sister, who has proved herself equally heroic and patient in nursing them. There is little doubt that, except for the devotion of these Australian nurses, our death percentage would have been very much greater. The foundation of these purely Australian hospitals was one of our finest acts to date, as the Australian soldier, sick and tended by his brother medico, and nursed by his sister nurse, becomes imbued with a feeling of home and ease. There is no doubt that the psychological condition produced by happy surroundings will have the greatest benefit to the recuperative powers of man. The condition of the mind is indeed a wonderful factor. One, to fully appreciate the fact, has only to board a transport, with sick and wounded, and see the manner in which these men recover once the boat is turned for home.

We also have evidence of another psychological condition which is produced by the reception of the Australian

mail. It is a well established fact that for a few days after mail day the bulk of the men at Gallipoli became different beings. One of our generals was heard to remark that as a fighting stimulus a bundle of letters and newspapers from home was the best that he knew of. When distance is considered, the work and spirit of our Australians has been remarkable.

Many good words of praise must here be given to the Australian Red Cross Society, whose work in general has been splendid. Much hard criticism was leveled at these people in the early period of the war, perhaps justly so, but now the management is all that it could be, and one has only to visit the hospitals to see the noble work which it performs. The Red Cross act which touched me most was the presentation of a box of eatable dainties in a nicely painted box to each of the wounded on arrival at the hospitals. One would see even the very badly wounded take these boxes with a look of delight, and a feeling that they had not been forgotten, and still had friends. After being admitted they are supplied with clothes, cigarettes, tobacco, chocolate, and in fact even a daily shave for nothing. The Red Cross barbers are indeed a great institution, and save the men much trouble and discomfort.

Some good words must also be said for the Y. M. C. A., whose work has also

been splendid. Every hospital has its branch at work where one may be supplied with writing and other materials such as books to read and the latest papers. The concerts and entertainments organized at night are a boon and a blessing to the sick and well alike. One cannot speak too highly of this Association, as they undoubtedly save hundreds of young fellows who would fall easy victims to the dangers of Egyptian life. It seems a pity that our young men should have been sent to mobilize on the outskirts of perhaps the most polluted city of the universe. Cairo itself commands a fascination of color and general Eastern looseness which lasts until the veneer of artificiality wears off, then the filth of the whole atmosphere comes to light. Every Australian seems to experience this feeling of loathing for the Egyptian and his country, and it is tolerably certain that very few of our Australians will want to remain there after the war. Our "White Australia" policy will be absolutely safe from attack after this by anyone who has served a period in this nigger country.

I am afraid I have wandered from the subject of dentistry in my endeavor to illustrate a few phases of life which one passes through as an Army dentist, and I will now return to the subject of our unit.

During my period as officer-in-charge of the Dental

Department at Heliopolis, No. 1 A. G. H., the variety of work performed was an eye-opener. Fractures were common, both upper and lower, and at times were in bad condition through neglect before we could manage to treat them. Bullet wounds, shrapnel wounds, and cases where portions of the jaw had been carried away entirely—these cases were handed over to us as they left the surgeons, and we found some good opportunities for facial restoration work. Ankylosis we found common, mostly due to impacted wisdom troubles; here we were fortunate in having a first-class "X" Ray department, which helped us on considerably. Glandular troubles were common, and in most cases surgical means had to be resorted to to remove the duct obstructions. Antrum troubles were fairly common, but not to the extent that one would expect with such an immense body of men. Our work included every branch of dentistry known for the alleviation of suffering.

Our members are undoubtedly doing a noble work and making a generous sacrifice. Their efforts are sure to be rewarded by the accomplishment of a permanent good, which will remain for future generations to appreciate. If we can only teach these men the value of oral cleanliness, now is the opportunity such that will never come our way again, when you think of two hundred thousand of our

men, and all within our reach and power. We must organize some means of getting in closer touch with these men and giving them daily talks and inspection. We must organize Mouth Parades, say two or three times a week, and make the men do the cleaning. It seems that every other portion of the anatomy must be kept clean except the mouth, which is the most important of all—one has only to take a day or two at recruit inspection to see what the army dentist has to put up with, and such a state will continue whilst he allows himself to be imposed upon. Another point is this—if

these men present such mouths when in a perfect state of health, what condition would they be in after severe illness? This neglect must be the cause of dozens of our men failing to ever leave the hospitals, as after severe dysentary and other stomach diseases it must be a hard battle to recuperate when their mouths and saliva are full of the most dreaded germs. We must awake now to our opportunity, and although it might mean an extra amount of work, the good we accomplish will reward us, as our teachings would be handed down from generation to generation.

# RESEARCH INSTITUTE REPORT OF THE NATIONAL DENTAL ASS'N BUILDING FUND

Complete to May 23, 1916

Cost of property .....	\$50,000.00
Amount secured to date, in cash and pledges.....	27,193.89
Balance to raise by July 21 (National meeting).....	22,806.11

## Contributions by states:

Colorado .....	\$ 500.00
Connecticut .....	50.00
Georgia .....	925.00
Illinois .....	680.00
Iowa .....	1,555.00
Kansas .....	660.00
Maryland .....	500.00
Massachusetts .....	110.00
Michigan .....	100.00
Minnesota .....	100.00
Missouri .....	672.00
New Jersey .....	5.00
New York .....	790.00
Nebraska .....	1,211.50
Ohio .....	15,668.89
Oklahoma .....	410.00
Pennsylvania .....	450.00
South Dakota .....	15.00
West Virginia .....	291.00
Special contribution from the Assigner of property.....	2,500.00

Total .....\$27,193.89

## NATIONAL MOUTH HYGIENE AND FREE DENTAL CLINICS

H. E. BLILER, D.D.S., Chicago, Ill.

IN this national propaganda of oral hygiene and free dental services for the school children, why not include systemic hygiene, which applies to cleanliness of the skin, mouth, nose, throat, stomach and the entire alimentary tract? Clean teeth do not decay; clean tonsils do not become inflamed; and there are no poisonous, gaseous, putrifactive changes in a clean stomach not distended by overeating. When you are ill a physician's first step is to give a laxative, no matter what the trouble may be, because no medicine will take proper effect while waste is in the lower intestines. If there were no waste there you probably would not be ill at all, because physicians agree that 95 per cent. of all human ills are due to the accumulation of waste matter in the gastro-intestinal tract.

The *New York American* has recently said: "During constipation the poisons in the large intestine often become so great as to form a serious menace to health and even to life. Through the walls of the intestine they enter the blood and consume the healthy blood cells, impoverishing the blood, and if this process is continued long enough acute poisoning is produced."

Closer attention to auto-intoxication (constipation) as

a source of disease will solve many of the most perplexing problems in internal medicine. *Vigilance, Price of Safety and Diet Prevention* should be taught. Eat moderately and of meat sparingly once daily. Preferably vegetables and fruit diet—such as nuts, prunes, soups, eggs, etc., avoiding pastry.

Dentists have been too restricted in treating local morbid conditions, such as pyorrhea, tri-facial neuralgia, head and toothache, fetid breath, carbuncle, appendicitis, sallow complexion, etc., ignoring the basic cause of systemic origin. If you cure or prevent any of the above maladies you cure them all. Spraying the nose, throat and air passages with most any pine tar products by deep inhalations, is a valuable prevention against diphtheria, adenoids, tonsilitis and the white plague (consumption), later caused by distending the stomach instead of the chest; lack of fresh air, nutrition and elimination of toxemias (poisons). The above statements can be easily verified, as I have by my clinical activities many testimonials, opinions and endorsements, upholding these contentions, on file.

Free dental clinics for children unable to pay are commendable. The results will be efficiency and health.

When I was in my teens, several of my teeth were filled, and I have needed no dental services for twenty-five years, and this will, no doubt, apply to most school children who have their teeth put in normal condition. With prophylaxis (modern tooth pastes, powders and washes) their teeth may never decay.

How will this affect the thousands of students turned

out each year topheavy with knowledge, ego and bovine? Personally, it makes no difference to me if there is not dental work enough to reach around, the balance can carry bricks or get a political job. At any rate, we must conform ourselves to progress, modern thought, action and facts—that prevention is the slogan of science, and science being trained common sense, spelling re-dress to the jaded mind.

## CORRESPONDENCE

### *Editor of Oral Hygiene:*

I was much interested, in reading the June number, in your write-up and cuts of the dental historical exhibit held at Hotel Adelphia as part of the Philadelphia Dental Manufacturers' Exhibit, April 25 to 28, 1916. I visited it more than once. It was a pleasure to meet my old friends of the trade and dental profession. Had a pleasant chat with Prof. Darby, also Prof. Guilford, and others.

The historical part, I confess, interested me greatly, as it brought back memories and experiences of the past, meeting the demands for the new as the old was discarded.

As I looked at the Dr. Bonwill exhibit, my memory went back to the time when we both worked together to make his electric mallet a success. I had to work out the correct kind of instrument for its use.

Then the model of the first dental engine: The burs we made for its use were about three inches long, with a slot in the center, and the price, \$3.00 per dozen, was gladly paid, as it meant the old six-inch hard bur would no longer be used. Some of the old pluggers, scalers, and other instruments, I felt were part of my own hand work over fifty years ago.

I might go over the exhibit, but feel it will make this too long. Will remark that the whole dental profession in my time has changed so that hardly any of the old landmarks are left. Sitting in the home of dear old Prof. James Trueman not long before he passed away, we both talked of the great changes that had taken place in our time, and I remember he said with a laugh, "I fear if I were to take up practice again I would have to take a college course to learn the

modern methods."

I sometimes wonder if I am not the oldest living dental instrument manufacturer in the country. As far as I am aware, all who were in the trade years ago have passed away. I need hardly tell you that one who is nearing his eightieth milestone has seen

great changes in the world, particularly the dental profession, in the line of instruments. Yet from my apprenticeship days to the present hour no one still has a greater interest than

Yours truly,

JAMES WHITTINGTON,  
Philadelphia, Pa.

*Editor, Oral Hygiene*:

For the past two years, I have been one of the many interested readers of *Oral Hygiene*, and inasmuch as you seem to be able through your magazine to get at the bottom of things, I am going to ask you to help me answer a most pertinent question, put to me recently by an elderly lady, one of my most desirable patients.

Let me explain. First, she came to me about ten months ago, referred by another patient of mine, and through her I have since acquired many particular patients, the type that you and I and every ethical dentist are anxious to have.

On one of her recent visits she made some comment on the progress of dentistry, mentioning also, the modern office equipments of today. "Now, Doctor," she said, "Why is it the majority of dentists do not use sanitary drinking cups? They will wash their hands and seem particular as to the appearance of their office, but will

ask you to expose yourself to infection by rinsing your mouth with a dirty old glass tumbler that everyone else uses."

She also went on to say that the fact that I used sanitary drinking cups, among other things, had given her the confidence she had placed in me.

Well I must confess, I could make her no satisfactory explanation. I felt that it was a reflection on the profession and certainly we should make ourselves right before any agitation should spring up from outside our ranks. I sincerely believe that the profession has never had this brought to their attention in the proper manner. A word or two in your magazine would be the best means of presenting this for their consideration, that the ethical sense may not be lost.

Trusting you may see fit in the near future to act upon this suggestion, I am

Sincerely yours,

J. E. SULLIVAN, D.M.D.  
Melrose, Mass.



**-◡- EDITORIAL -◡-**

WM. W. BELCHER, D.D.S., EDITOR  
186 Alexander Street, Rochester, N.Y.

**ORAL HYGIENE** does not publish Society Announcements, Obituaries, Personals or Book Reviews. This policy is made necessary by the limited size and wide circulation of the magazine. -◡- -◡-

## STATE BOARD EXAMINATIONS AND THE DENTAL COLLEGE

THE June issue contained a report of the tabulating committees of the National Association of Dental Examiners and the National Faculties Association, each of which maintains a separate bureau for tabulating the reports of the graduates of the dental colleges who have taken the State Board examinations. As this was taken from the printed proceedings of the National Association of Dental Examiners, it was presented without apology. It contains information of vital importance and the profession is entitled to a full knowledge of such matters.

The failures for 1915 varied from 2 to 100 per cent., and for the years 1910 to 1915, inclusive, 3.1 to 100 per cent. The latter report is of a single graduate of the Royal College of Dental Surgery, Ontario, Canada, who tried the examination and failed. There can be no question of the injustice of such a report, so far as the Canadian College is concerned.

Only the first examination of the student is given, which is final, so far as the tabulating committee is concerned. Undoubtedly many of the men failing on the first trial are successful in the second or third effort. Those responsible for the tabulation reports recognize the deficiencies of the present system, but without funds to employ a paid secretary, it is manifestly impossible for them to do more than report the first examinations, which are the result of much time and correspondence. As all the dental schools are classed under this rule, it is as fair or unfair to one as all.

But such a report is oftentimes manifestly unjust. Of course, all the schools are supposed to get the same rating under equal conditions, but in some states the student is



permitted to appear before the board at the end of his second year and take an examination on the studies he has completed, and thus devote his time in college exclusively to the remaining subjects; other states deny him this. Divided examinations seem most desirable for all concerned. If you ever conscientiously tried to pass an examination in from fifteen to twenty subjects you would know what it means to have a solid ivory headpiece.

Our examining boards are not and never have been perfect. In some states we regret that in the past there should have been proven instances of members who were morally corrupt and seeking financial consideration for their favorable report. Men are nominated for the position of examiner and maintained in office, notwithstanding the fact that they are incompetent. Then, again, there seems to be no age limit, and, in many cases, once an examiner always an examiner. It is up to the dental societies to see that the members of their examining boards are beyond criticism, and if a man reaches the age of say, sixty years, he should be replaced; do not let us make this important office an honorary one. In many states the examining board is appointed under political conditions, and unquestionably to its detriment.

A dental college, with its graduates appearing exclusively before its own state board for examination, with a high rating is open to the suspicion that it has not been out to the acid test of a school whose student body comes before ten or a dozen and no favors asked. Then, again, the school preparing its graduates for practical work may neglect the theoretical side, and although well fitted mechanically, they would make a poor showing.

The American Medical Association gives an unfavorable rating to the privately-owned school. Some of the worst dental colleges are in this class, and again, some of the best. While the report is not conclusive, one would judge that the school of not over two hundred students is giving better instruction and the professors able to get in personal touch with the student body easier than when the number is increased to two, three, or even five times the number. Perhaps this is only a detail, and if the larger school were divided into separate units and the lectures delivered to each the objection would be removed.

We confess our inability to figure out the reason for the favorable standing of some schools and the poor showing of others. The fact remains that if a dozen schools can show an average of 3 to 10 per cent. for six years (one of these with its students examined in ten states), then it is possible for all. An institution which continues to graduate, year after year, men who continuously fail, and 25 to 50 per cent. cannot make

their state board examinations without further study or coaching, is a disgrace to itself and the profession.

But even in these schools, undoubtedly open to censure, there are isolated instances of talented teachers who are striving to their utmost; men who would be a credit to any institution.

The medical profession, in purging itself, has found it necessary to close one-third of its schools, and the graduates have declined at a greater rate. The field of dentistry is not crowded; we could double the number of graduates and not equal the demand. The dental profession in the next few years is to ask an accounting of its examining boards and dental colleges. We must do our share in strengthening the examining board and help the weaker schools to better things. This means much more than new equipment. The time has passed when you can throw a lot of chairs, fountain spittoons and electric engines together, with a sprinkling of poorly paid demonstrators, and call it a dental college. None of these will take the place of personal supervision and full term professorships. This calls for men of the highest standard, who shall be able to meet the increasing need of graduates capable of a bigger and broader professional life.

The handwriting is on the wall: "MENE, MENE, TEKEL, PERES, UPHARSIN." This doesn't require a Daniel to interpret, and the dental school refusing to keep in step will go down and out, and deservedly so.

"Though the mills of God grind slowly,  
They grind exceeding small;  
Though with patience He stands waiting,  
With exactness grinds He all."

## SUBSCRIPTIONS TO THE LOVING CUP \$1,209.54

Artists are busy preparing designs for the cup, and we hope to present a cut of the accepted drawing at an early date.

The Editor announces receipt of the following belated subscriptions:

R. S. Fleming, New Haven, Conn.; C. E. Lutz, Los Angeles, Calif.; A. W. Herrman, Philadelphia, Pa.; J. A. Herrman, Philadelphia, Pa.; Harry Wilcox, New York City, N. Y.; W. F. Faust, Milwaukee, Wis.; W. W. Marvel, Fall River, Mass.; J. C. Clements, C. R. Tillston, E. H. Cantwell, Edw. Schwartz, Francis U. Kohler, Buffalo, N. Y.; W. E. Beinhart, Cincinnati, Ohio; W. F. Rule, Bangaloo, India; August Lemm, Sidney, Australia, \$5.75; New Haven Dental Society, \$15.00. Total, \$1,209.54.

## DENTISTRY AND PREPAREDNESS

OUR lack of preparedness to enter warfare under modern conditions is evident in the dearth of dental attention among the men making up our militia, who have enjoyed all the privileges of the white man, including that of neglecting his teeth. These men, summoned from the marts of trade, the school, office and factory, who have had the privilege of consulting the dentist, are found to be, in many cases, unfit as gun-fodder because of this neglect.

The American dental dispensary is very much in evidence with the work of the Forsyth Institute, where by arrangement with the authorities of the Commonwealth of Massachusetts, the Adjutant-General and the Surgeon-General, plans were made immediately following the order to mobilize the Massachusetts Militia to have the teeth of the soldiers treated free of charge, and for two days a large group of dentists operated on as many as could be sent from the camp.

The soldiers came in squads from the Framingham Camp, varying in numbers from forty to eighty. With the very generous coöperation of the operators on the staff of the Infirmary, also the Visiting Staff, and many outside members of the profession, they were able to treat approximately 409 men during Saturday and Sunday by having 65 chairs in operation most of the time.

One thousand nine hundred and sixty-two fillings, 188 cleanings, 211 silver nitrate applications and 271 extractions were done during the short time available. The regular chairs, which were originally designed to be suitable for either small or grown children from two to sixteen years, were easily capable of being used to advantage in treating the full-grown soldier boys.

If we judge from an article appearing in this number, "Reminiscences From One of the First Oversea Dental Units," by Dr. E. S. Molle, Australia, conditions under his observation would lead us to suppose that this is a worldwide condition.

In the past a soldier could pass muster if his equipment had a bright polish, no buttons were missing and a mouth that looked like a burnt district, so long as two opposing molar teeth on each side were doing duty. Hereafter the every-day inspection and care of the teeth will be considered an essential in military preparedness.

This war in Europe is revolutionizing many things and the needs of dentistry and its being a factor in the modern war is clearly and definitely defined. The standing of dentistry in the armies of the world is to be firmly established and unquestioned.

# NOTE AND COMMENT

The little fly is so polite,  
 He bows and scrapes with all his might,  
 And on our food, he is so "neat,"  
 He always stops to wipe his feet.

On June 13, 1916, the United States Circuit Court of Appeals for the Seventh Circuit rendered its decision that Dr. W. H. Taggart cannot undertake to enforce his claims by bringing suit against dentists jointly or collectively. This decision does not change the status of the "test case" as to the validity of the Taggart patents. It does settle for all time the question as to whether or not he can sue dentists collectively, should his patents be held valid. The present suit, which is defended by the Dentist's Mutual Protective Alliance, is still pending in the District Court at Chicago.

Six million, five hundred thousand pounds of chicle, the basis of chewing gum, was imported into the United States in 1915. During the past ten years the chicle imported has cost nearly \$35,000,000, which gives some idea of the popularity of gum chewing among Americans.

America is importing over a quarter of million tons of zinc ore annually, principally from Australia. We never imported this material before and our own mines have doubled their capacity. It is expected this country will produce 905,000 tons of spelter in 1916. This exceeds by 10 per cent. the whole world's production in 1914.

To make the half dollar a more popular coin, the U. S. Mint is preparing a new design. That any coin with U. S. A. on either side, made of real silver, was ever unpopular is news indeed. If anyone takes a violent dislike to any of the old fifty-cent pieces, we would like to announce the fact that we are willing to pay the postage on any number, and then some.

Infant mortality and a living wage for the head of the family were shown to be closely co-related, in a recent issue of the magazine. Quite as startling, is a recent bulletin issued by the United States Public Health Service on the tuberculosis question.

## Tuberculosis Among Heads of Families According to Income. (Group of Garment Workers, New York City)

Annual Earnings of Family Heads	Total No.	Per Cent of Family Heads Tuberculous
Under \$500 .....	372	5.64
From \$500 to \$699.....	566	5.30
\$700 and over.....	456	44

With buildings erected and a thousand toolmakers busy, the Remington Arms Company have found it impossible to get enough lathes and necessary machinery together after a year's effort to take care of an order for \$80,000,000 of rifles. About 10,000 men are employed as compared with 20,000 that will eventually be needed. Some 1,700 different tools are required in the manufacture of a rifle and they are not assembled in a hurry.

The New York Department of Health, after sixteen months in court, won a decision that saccharine is a harmful ingredient when put in any beverage.

Glycerine has long been regarded as possessing some degree of antiseptic power but it has been proven to be a most efficient sterilizing agent. It is particularly suited for steel instruments, making them absolutely aseptic without injury to temper or surface. The glycerine is heated to a temperature of 120 degrees centigrade and steel instruments can remain in the solution for an hour or more and no injury. A minute is said to kill all germs, and rubber tubes are not only uninjured, but restored to their original elasticity.

"The News and Opinions" department of the *Dental Summary*, conducted by G. E. Harter, has some things to say about a recent banquet of the Seventh District Dental Society (N. Y.), in which vaudeville took the place of oratory. This was at a one day meet and except for a few invited guests, strictly a family party. There is always room for argument whether you prefer to listen to the 'Tin Gods' rattle or good music and a few selected entertainers at such a gathering. The ladies were neither "half naked, wholly shameless, voiceless or tactless." They conducted themselves with strict decorum and the dentists present had no inclination to either fight or run. The story is told of the man at the barber shop who refused to have scented talcum powder on his face for fear his wife would think he had been in the red light district; his neighbor said, "Sure, put it on; my wife never was in such a place." I guess that's the answer. When I see these poor little wisps of girlhood working in a public hotel at night, with no women about, I think, what a hell of a life for a woman, and no doubt because some man is not doing his duty.

Treat her nicely, Buddy. Give her a small tip and say, "Thank you, sister." Let her know you are a human being and all the evening she will treasure the remembrance as a blessing.

The Supreme Court of the United States recently interpreted the Harrison Federal drug act of 1914, making it unlawful for any person not registered under the law to have opium in his possession, as applying only to those who dealt in the drug and not to those who use it.

Mexican paper money is somewhat depreciated in value. Coffee is selling at \$3.00 per cup and oranges \$1.50 each in the new uncounterfeitable currency, while the old issue requires \$50 to pay for a pound of butter.

Distilleries all over the South today are virtually swamped with war orders for denatured alcohol from foreign and domestic explosive manufacturers. They are operating their plants night and day to catch up with the consumption which is running at the rate of 50,000,000 gallons per annum.

Every pound of smokeless powder exploded contains .94 of a pound of denatured alcohol and it has been estimated, every time a big shell is exploded on the European war fronts, one barrel of denatured alcohol is consumed. The military heads in Europe recognized the necessity of commandeering all output of alcohol and other spirits at the beginning of the war. It is expected that the demand of American manufacturers will continue for a year or two after the close of the war, as European distillers will be unable to supply the beverage and perfume makers, owing to the fact that the beet sugar, grain, and grape crops of Europe will be devoted to usages outside of the alcohol field.

Ninety per cent. of the dentists in Russia are said to be women. The chief school is the dental college at Petrograd which has six hundred students, less than five per cent of whom are of the sterner sex. Warsaw, Moscow, Odessa, and Kiev, also boast of large dental schools. The course is three years and the fees for tuition amount to approximately \$100 per year. The State diploma costs \$10 and a license to practice is granted only after proof of qualification. The first year is devoted to mechanical dentistry and the subsequent years to clinical work from 10 A. M. to 5 P. M. After this follow lectures until 9 P. M. Examinations are held every month. The lecturers at Petrograd number about twelve and come from the Imperial University Faculty of Medicine. The ten demonstrators are chiefly women. Fees in both medicine and dentistry are considerably lower than in America and hours of work are longer. Men seem to prefer the medical profession, and it is said that even in Petrograd the men dentists of standing do not number more than half a dozen.

Harvard University, in connection with the Massachusetts Institute of Technology, according to a catalogue for 1916-1917, just issued, will present sixty courses of study in the School for Health Officers. The different courses to be given are divided into ten groups dealing with various phases of sanitation problems. These have been selected to cover a wide range, including medical, biological, hygienic and engineering sciences, together with practical health administration. The certificate in public health (C. P. H.) will be granted to candidates who have satisfactorily completed the studies in their approved schedule, who have spent not less than one academic year in residence, and who have otherwise complied with all requirements.

A patient was received at the Waltham (Mass.) hospital, who had accidentally swallowed a partial plate of three teeth. An X-ray examination showed the missing dentures located in the intestines. An operation was performed and the teeth removed but the patient died.

The Bureau of Food and Drug Inspection of the Department of Health, New York City, is about to begin an inspection of the city's 5163 hotels and restaurants to determine to what extent they observe the law in respect to pure food, sanitation and the treatment of employees. They will be graded as "Good," "Fair," or "Bad," according to the conditions, and officially certified as such.

Dr. Edward C. Kirk is now among the active propagandists along the lines of Oral Hygiene. The movement is to be congratulated.—*Dental Summary.*

Sure thing; come on in Eddie and rest your hands and feet. The Throne Chair is busy now but be a good boy and——perhaps!

Little Modest Miss to the Adirondack Camp storekeeper: "I called to purchase some powdah." Old Settler; "Face, Tooth, Gun or Bug?"

The senior member of the Lee S. Smith and Son Company, Pittsburgh, Pa., has been honored by the office of Grand Master of the Knights Templars of the United States of America. The office is for a term of three years and the recipient is loved, honored and respected by an organization numbering a quarter million of the choicest manhood in the world. The ceremonies of installation occurred at Los Angeles, Cal., and the trip from Pittsburgh was by the special train of the Grand Master. The return trip via the Canadian Rockies, and a magnificent reception on arrival at Pittsburgh.





## HERE'S A NEW ONE



We want good clean humor for this page and are willing to pay for it. Send me the story that appeals to you as "funny" and if I can use it, you will receive a check on publication—Address EDITOR, 186 Alexander St., Rochester, N. Y.

She—Isn't it disgusting to find a worm in the apple you are eating?

He—There are worse things.

She—For instance?

He—Finding half a worm in an apple.—A. K., Chicago, Ill.

Teacher—Who can make a sentence with the word "gruesome" in it?

Willie—I can. The man stopped shaving and "grewsome" whiskers.—F. M. W., Kingston, Pa.

A big husky Irishman strolled into the civil service room where they were holding physical service examinations for the police force.

"Strip," ordered the police surgeon.

"Which, sor?"

"Get your clothes off, and be quick about it," said the doctor.

The Irishman undressed. The doctor measured his chest and pounded his back. "Hop over this rod," was the next request. The man did his best, landing on his back. "Double up your knees and touch the floor with your hands." He lost his balance and sprawled upon the floor. "Now jump under this cold shower." "Sure and that's funny," muttered the applicant. "Now run around the room ten times. I want to test your heart and wind." The last was too much. "I'll not," declared the candidate definitely, "I'll stay single."

"Single?" inquired the doctor, puzzled. "Single," replied the Irishman with determination. "Sure an' what's all this funny business got to do with a marriage license, anyhow?"

He had strayed into the wrong bureau.—M. S., Pittsburgh, Pa.

Old lady—Mister, the milk I'm paying you good money for is half water.

Milk man—I haven't the least doubt of it. I was surprised myself when they told me that milk was over eighty per cent. water after they had taken the analysis!

Old lady—Well, now! I want you to understand that I don't want no 'nalysis nor nothing else taken from it, I want it just as it comes from the cow!—C. N. L., Schenectady, N. Y.

The passenger who complained to a western railroad that he had to sit up all night in the smoking compartment rather than share his berth with a fine line of bedbugs, received an abject apology. The letter was so courteous and reasonable he felt that he had been rather curt and faultfinding. Through error his original letter had been returned with the letter of apology. Looking at it, he saw scrawled across the top this blue pencil indorsement: "Send this guy the bedbug letter."—C. J. C., Webberville, Mich.

"Oh, no!" soliloquized Johnny bitterly: "there isn't any favorites in this family. If I bite my finger nails I get a rap over the knuckles, but if the baby eats his whole foot, they think it's cute."—A. C. G., Johnstown, Pa.

"WHICH would you advise me to be, father, a dentist or an eye and ear specialist?"

"Choose the teeth, my boy; everybody has thirty-two of them, but only two ears and two eyes."—O. B., Indianapolis, Ind.